



## Spatial Data Review for Vegetation Mapping Products Hopewell Furnace National Historic Site

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### DATA FILES

List of files submitted to the National Park Service:

File Description	File Type	File Name
Alliance-level veg map	Shapefile	alliance_map_utm83.shp
Thematic accuracy assessment point data	Shapefile	veg_plots.shp
Spatial accuracy assessment point data	Shapefile	acc_assess1.shp
Orthophoto mosaic	Mr. Sid	hofu_final.sid
TNC PLOTS Database – thematic accuracy assessment	MS Access database	PLOTDATA.MDB

All spatial layers are in this projection: UTM 18, NAD 83, meters

### SPATIAL FEATURES

- Do all features line up with other data such as the park boundary and the orthophoto mosaic?  
*Yes, all features line up with the park boundary and the orthophoto mosaic.*
- Do all features fall within the park boundary?  
*Yes.*
- Are vegetation polygons complete? Any slivers?  
*Yes polygons are complete and do not contain slivers.*

- Is the entire area of the park covered by vegetation polygons?  
*No, the vegetation polygons do not cover the entire park. There are small areas within the park boundary but outside of the veg polygons. The following polygons stop before the park boundary: RECNO = 66, 43, 44, 2, 45, 78, 50, 55, 56, and 54.*

#### ATTRIBUTE TABLE

- Are all required fields names included?  
*Yes.*
- Are standard field names used?  
*Standard field names have not been adopted. As of July 2, 2004, a naming convention for vegetation mapping products has been proposed. The names are under review.*

*The table below includes all the field names by shapefiles. The required fields are followed by the proposed naming standard in parenthesis.*

*If the naming convention is adopted, the field names for the required fields should be changed.*

vegplots.shp	acc asses 1.shp	Alliance map_utm83.shp
Shape (Shape)	Shape (Shape)	Shape (Shape)
Point (VegPlot ID)	NORTHING (Northing)	FORM_MAP_I (Form ID)
Easting (Easting)	EASTING (Easting)	FORMATION_ (Form Code)
Northing (Northing)	COMMENT (AA ID)	FORM_DESCR (Form Desc)
EPE	RCVR_TYPE	RECNO (AllianceID)
DOP	GPS_DATE	ALL_CODE (Allia Code)
RECNO	HORIZ_PREC	ALLIANCE_D (Allia Desc)
	CORR_TYPE	COMMON_NAME (Park Name)
	MAX_PDOP	COMMENTS

- Are data values truncated because field lengths are too short?  
*Yes, some data values are truncated. See below.*

Shapefile	REC_NO	Field
alliance_map_utm83	34	FORM_DESC
	71	FORM_DESC
	14	ALLIANCE_D
	15	ALLIANCE_D

	57	ALLIANCE_D
	71	ALLIANCE_D
	76	ALLIANCE_D

- Does each field have only one data value?  
*No, one field has more than one data value. See below.*

Shapefile	Field	REC_NO
Alliance_map_utm83	FORMATION	71

- Are formation and alliance codes valid?  
*The alliance codes (ALL\_CODE) in the following table were not found in the report.*

COMMON_NAM	ALL_CODE	ALLIANC_D	FORMATION_	FORM_DESCR	Total
Cropland	CROP	Cropland	CROP	Cropland	3
Developed Land	DEV	Developed land	DEV	Developed Land	12
Modified Successional Forest	MSF	Modified Successional Forest	I.B.2.N.a	Lowland/submot cold-decid forest	5
Orchard	ORCHARD	Orchard	ORCHARD	Orchard	2
Pasture	PASTURE	Pasture	V.A.5.C.x	Planted/cult temp/subpolar grassland	3
Pasture-Wet	PASTURE-WET	Pasture-Wet	V.A.5.C.x	Planted/cult temp/subpolar grassland	3
Transportation corridor	Primary Road	PA Route 345	TRANS	Transportation corridor	1
Right of way	ROW	Right of way	ROW	Right of way	3
Transportation corridor	Secondary Road	Hopewell Road	TRANS	Transportation corridor	3
		Mark Bird Land			
		park road			
Transportation corridor	TRANS	Transportation corridor	TRANS	Transportation corridor	2
Total number of 82 alliance polygons with no NVC alliance code =					37

- Is the syntax for the Formation and Alliance codes correct? The formation codes should end in a lowercase letter and the alliance codes should end in a number. They should not end in a “.”  
*Yes, they are okay.*

- Are the formation and alliance descriptions correct or are they abbreviated?  
*The descriptions are abbreviated and need to be reviewed. I recommend putting the full description in the field, because the classification system is dynamic.*
- Do the formation codes and descriptions correspond to the alliance code and descriptions? I am using the final report as a reference.  
*No, see table below.*

RECNO	FIELD	CURRENTLY	SHOULD BE	Comments
80	FORMATION	III.B.2.N.E	I.B.2.N.E.	
34	FORMATION	II.A.4.N.b	I.A.8.N.c.	In the shapefile, this is listed as a juniper forest and in the final report it is listed as a woodland.
	FORM_DESC	Conical-crowned temperate.... woodland	Conical-crowned temperate.... forest	
	ALLIANCE_D	Juniper woodland	Juniperus virginiana forest alliance	
	ALL_CODE	II.A.4.N.b	I.A.8.N.c.2	
63	FORMATION	III.B.2.N.c	III.B.2.N.e	
	FORM_DESC	Temp flooded cold-decid shrubland	Seasonally flooded cold-deciduous shrubland	

- Miscellaneous:  
*In alliance\_map\_utm83, for FORM\_DESC “Transportation corridor” the ALL\_CODE is either Primary Road, Secondary Road, or TRANS. Should they all be TRANS? The alliance description for these records is “Transportation corridor” for TRANS, but the actual road name for the primary and secondary roads.*

## METADATA

- Does each spatial data layer have an associated metadata record?  
*No. Only one metadata record – Word document “Metadata for spatial databases” was submitted for all four layers. This is not FGDC compliant. Each layer needs its own metadata record with all sections completed. The table below is a breakdown of the information present in the Word document.*

Section	acc_assess 1.shp	hofu_final.sid	veg_plots.shp	alliance_map_utm 83.shp
1-Id_Info				X
2-Data_Q			X- incomplete	X
3-Sp_Data		X		
4-Sp_Ref				X
5-Ent&Att	X	X	X – entity	X

			label is Datapoints_1 but may be the same??	
6-Dist Info			X	
7-Met Ref			X	

(X) indicates section is complete

- Compare entity and attribute information to spatial layer  
*The following entity labels are incorrect in the metadata:*

Shapefile	Field	Current	Correction
veg_plots	Entity_Type_Label	Datapoints_1	veg_plots
	Attribute_Label	PLOT_NUM	RECNO

- Results of metadata parser (mp) check  
*No point in running it through mp since it is not a complete metadata record.*
- Make sure version of classification used is in metadata  
*The Codeset Name is referenced as "International Classification of Ecological Communities: Terrestrial Vegetation of the Northeast United States. Pennsylvania and Ecoregion 61 Review Subset." Need date!*

*It is essential that a version is documented for the alliance and formation codes, since they may change in the future.*

## PLOTS DATABASE

- Does the plots spatial data layer contain the same number of plots as the plotdata database?  
*Yes. Both have 34 locations.*

**This review assumes that the formation and alliance codes and descriptions in the final report are correct.**

**The data in the following table was extracted from the final report: Vegetation  
Classification and Mapping of Hopewell Furnace National Historical Site, November 2003:  
Draft Report.**

HOFU Alliance Name	NVC Alliance Code	NVC Alliance	NVC Formation Code	NVC Formation
Tulip Poplar Forest	I.B.2.N.a.24	Liriodendron tulipifera forest alliance	I.B.2.N.a.	Lowland or submontane cold-deciduous forest
Dry Oak – Heath Forest	I.B.2.N.a.36.	Quercus prinus - (Quercus coccinea, Quercus velutina) forest alliance	I.B.2.N.a.	Lowland or submontane cold-deciduous forest
Dry Oak – Mixed Hardwood Forest	I.B.2.N.a.27.	Quercus alba -(Quercus rubra, Carya spp.) forest alliance	I.B.2.N.a.	Lowland or submontane cold-deciduous forest
Modified Successional Forest		No NVC equivalent		
Red Maple – Mixed Hardwood Palustrine Forest	I.B.2.N.e.1	Acer rubrum - Fraxinus pennsylvanica seasonally flooded forest alliance	I.B.2.N.e.	Seasonally flooded cold-deciduous forest
Highbush Blueberry – Meadow-sweet Wetland	III.B.2.N.e.7.	Vaccinium formosum - Vaccinium fuscatum seasonally flooded shrubland alliance	III.B.2.N.e.	Seasonally flooded cold-deciduous shrubland
Successional Scrub – Shrub (Powerline Right of Way Corridor)		No NVC Alliance equivalent		
Birch Rocky Slope Woodland	II.B.2.N.a.24.	Quercus rubra - Quercus prinus woodland alliance	II.B.2.N.a.	Cold-deciduous woodland
Juniper Woodland	I.A.8.N.c.2.	Juniperus virginiana forest alliance	I.A.8.N.c.	Conical-crowned temperate or subpolar needle-leaved evergreen forest
Buttonbush Wetland	III.B.2.N.e.3.	Cephalanthus occidentalis seasonally flooded shrubland Alliance	III.B.2.N.e.	Seasonally flooded cold-deciduous shrubland
Grassland	V.A.5.N.c.103.	Dactylis glomerata -	V.A.5.N.c.	Medium-tall sod

		Rumex acetosella herbaceous alliance		temperate or subpolar grassland
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